

Chapter 2

Test Specifications

There are two primary reasons for test specifications. First, they help ensure that the assessment is measuring what it is intended to measure. Second, test specifications help ensure that across the years of an accountability cycle, the sample of tasks upon which school success is judged are equivalent. While consistency is expected through the period school year 1999 through 2014, changes did occur between school year 1998 and school year 1999. These changes were mainly a result of 1998 Legislative actions and as a result of revisions to the Kentucky Core Content for Assessment.

Three sets of specifications were used to develop the 1998-1999 Commonwealth Accountability Testing System (CATS) Kentucky Core Content Tests (KCCT)—the Academic Expectations, the Core Content for Assessment, and the test blueprint. The Academic Expectations characterize what students are to achieve and are tied to Kentucky's six learning goals. The learning goals broadly define the achievement expectations for all students. The Core Content for Assessment provides greater definition and specification of the content that will be included in the Kentucky Core Content Tests while the test blueprint indicates the relative emphasis of the content outlined in the Core Content for Assessment. Each of these documents is considered below. In addition to the aforementioned specifications, Kentucky's curriculum frameworks provide benchmarks and further information about content, concepts, and context for questions on the Kentucky Core Content Tests.

Learner Goals and Academic Expectations

Like KIRIS, the Kentucky Core Content Tests assesses four of the six learner goals—Goals 1, 2, 5 and 6. Table 2.1 lists the four goals that are the basis of the assessment. By statute, Goals 3 and 4 are not assessed. Goals 5 and 6 are addressed through the writing portfolio.

Table 2.1 KENTUCKY'S FOUR LEARNER GOALS THAT ARE MEASURED by the Kentucky Core Content Tests
<ol style="list-style-type: none">1. Students are able to use basic communication and math skills for purposes and situations they will encounter throughout their lives.2. Students shall develop their abilities to apply core concepts and principles from mathematics, the sciences, the arts, the humanities, practical living studies, and vocational studies to what they will encounter throughout their lives.5. Students shall develop their abilities to think and solve problems in a variety of situations they will encounter in life.6. Students shall develop their abilities to connect and integrate experiences and new knowledge from all subject matter fields with what they have previously learned, and build on past learning experiences to acquire new information through media sources.

These learning goals have been further defined by 57 academic expectations. These statements provide global statements about the expectations of what students should know and be able to do. (The Accountability Cycle 3 Technical Report provides the history of the development of the academic expectations). Table 2.2 identifies the academic expectations covered by the 1998-99 Kentucky Core Content Tests that fall under Goal 1 for each grade level assessed.

Table 2.2
ASSESSMENT OF KENTUCKY'S ACADEMIC EXPECTATIONS--GOAL 1
THROUGH MULTIPLE-CHOICE AND OPEN-RESPONSE ITEMS

Academic Expectation	Description	4	5	7	8	10	11	12
1.1	Students use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools such as interviews and surveys to find the information they need to meet specific demands, explore interests, or solve specific problems.							
1.2	Students make sense of the variety of material they read.	•		•		•		
1.3	Students make sense of the various things they observe.							
1.4	Students make sense of the various messages to which they listen.							
1.5 – 1.9	Students use mathematical ideas and procedures to communicate, reason, and solve problems. (All Mathematics items assess these Academic Expectations).		•		•		•	
1.10	Students organize information through development and use of classification rules and systems.							
1.11	Students write using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.	•		•				•
1.12	Students speak using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.							
1.13	Students construct meaning and/or communicate ideas and emotions through the visual arts.		•		•		•	
1.14	Students construct meaning and/or communicate ideas and emotions through music.		•		•		•	
1.15	Students construct meaning and/or communicate ideas and emotions through movement.		•		•		•	
1.16	Students use computers and other kinds of technology to collect, organize, and communicate information and ideas.							

Core Content For Assessment

Distribution of Subdomains

The Core Content for Assessment, developed by the Kentucky Department of Education, provides information to educators about the focus of the assessment. Recognizing the difference between information that should be taught but not necessarily assessed (because of the sensitive nature of a topic or the inability of a paper and pencil assessment to adequately reflect student learning), the Core Content for Assessment provides guidelines for the development and selection of the assessment items. This document defines the assessable content at three levels-- domain, subdomain, and specific content statement for all grades and subjects.

Tables 2.3 through 2.8 provide breakdowns by grade level for test items at the subdomain level. These values are based on the primary content code only. These tables include the total number of unique matrix multiple-choice, linking multiple-choice and matrix open-response items for the 1998-1999 Kentucky Core Content Tests. (Due to limitations on the number of items in the existing item pool, not all subject areas had the desired number of assessment items. Consequently, some items were repeated, but these repeated items were only counted once in this analysis). Because the open-response items and all Arts and Humanities and Practical Living and Vocational Studies items were not used as part of the scaling/linking design, none of these items has been identified as linking in the tables. In addition, because the high school reading assessment moved from grade 11 to grade 10 in 1998-99, no scaling/linking was performed, and thus no items were identified as linking. The number of items reported does not include pretest items typically present in the assessment. It should also be noted that open-response items are given twice the weight when scored.

Table 2.3
DISTRIBUTION OF ITEMS ACROSS SUBDOMAINS
FOR GRADE 4 OPEN RESPONSE AND MULTIPLE CHOICE

Content Area	Subdomain	Linking	Matrix		Total	
		MC	MC	OR	MC	OR
Reading	1 Information	8	29	9	37	9
Reading	2 Literature	12	56	17	68	17
Reading	3 Persuasion	0	15	4	15	4
Reading	4 Practical / Workplace	4	12	4	16	4
Science	1 Physical Science	7	28	5	35	5
Science	2 Life Science	7	42	12	49	12
Science	3 Earth & Space Science	5	38	7	43	7
Science	4 Inquiry	3	14	12	17	12

Table 2.4
DISTRIBUTION OF ITEMS ACROSS SUBDOMAINS
FOR GRADE 5 OPEN RESPONSE AND MULTIPLE CHOICE

Content Area	Subdomain	Linking MC	Matrix MC OR		Total MC OR	
Arts & Humanities	1 Music	--	29	7	29	7
Arts & Humanities	2 Dance	--	19	5	19	5
Arts & Humanities	3 Drama/Theatre	--	19	5	19	5
Arts & Humanities	4 Visual Arts	--0	29	7	29	7
Mathematics	1 Number/Computation	11	46	11	57	11
Mathematics	2 Geometry/Masurement	5	30	11	35	11
Mathematics	3 Probability/Statistics	5	24	9	29	9
Mathematics	4 Algebraic Ideas	2	20	4	22	4
Practical Living/ Vocational Studies	1 Individual & Health Family Relationships (Practical Living)	--	6	3	6	3
Practical Living/ Vocational Studies	2 Consumer Choices (Practical Living)	--	6	2	6	2
Practical Living/ Vocational Studies	3 Physical Well-being (Practical Living)	--	29	7	29	7
Practical Living/ Vocational Studies	4 Mentally & Emotionally Healthy (Practical Living)	--	3	1	3	1
Practical Living/ Vocational Studies	5 Community Services (Practical Living)	--	7	1	7	1
Practical Living/ Vocational Studies	6 Psychomotor Skills (Practical Living)	--	12	1	12	1
Practical Living/ Vocational Studies	7 Lifetime Physical Activities (Practical Living)	--	8	4	8	4
Practical Living/ Vocational Studies	8 Career Planning (Vocational Studies)	--	9	1	9	1
Practical Living/ Vocational Studies	9 Skills & Work Habits for Success (Vocational Studies)	--	16	4	16	4
Social Studies	1 Government & Civics	4	23	8	27	8
Social Studies	2 Culture & Society	5	13	4	18	4
Social Studies	3 Economics	4	21	9	25	9
Social Studies	4 Geography	2	37	6	39	6
Social Studies	5 History	4	30	9	34	9

Table 2.5
DISTRIBUTION OF ITEMS ACROSS SUBDOMAINS
FOR GRADE 7 OPEN RESPONSE AND MULTIPLE CHOICE

Content Area	Subdomain	Linking MC	Matrix MC OR		Total MC OR	
Reading	1 Information	8	40	12	48	12
Reading	2 Literature	7	49	14	56	14
Reading	3 Persuasion	4	16	5	20	5
Reading	4 Practical / Workplace	4	16	5	20	5
Science	1 Physical Science	6	32	5	38	5
Science	2 Life Science	5	25	6	30	6
Science	3 Earth & Space Science	6	35	9	41	9
Science	4 Inquiry	6	29	16	35	16

Table 2.6
DISTRIBUTION OF ITEMS ACROSS SUBDOMAINS
FOR GRADE 8 OPEN RESPONSE AND MULTIPLE CHOICE

Content Area	Subdomain	Linking MC	Matrix MC OR		Total MC OR	
Arts & Humanities	1 Music	--	25	7	25	7
Arts & Humanities	2 Dance	--	17	4	17	4
Arts & Humanities	3 Drama/Theatre	--	21	5	21	5
Arts & Humanities	4 Visual Arts	--	27	6	27	6
Arts & Humanities	5 Literature	--	5	2	5	2
Mathematics	1 Number/Computation	6	38	8	44	8
Mathematics	2 Geometry/Measurement	5	34	11	39	11
Mathematics	3 Probability/Statistics	5	28	11	33	11
Mathematics	4 Algebraic Ideas	5	23	5	28	5
Practical Living/ Vocational Studies	1 Individual & Health Family Relationships (Practical Living)	--	6	1	6	1
Practical Living/ Vocational Studies	2 Consumer Choices (Practical Living)	--	9	2	9	2
Practical Living/ Vocational Studies	3 Physical Well-being (Practical Living)	--	17	4	17	4
Practical Living/ Vocational Studies	4 Mentally & Emotionally Healthy (Practical Living)	--	14	3	14	3
Practical Living/ Vocational Studies	5 Community Services (Practical Living)	--	4	2	4	2
Practical Living/ Vocational Studies	6 Psychomotor Skills (Practical Living)	--	7	0	7	0
Practical Living/ Vocational Studies	7 Lifetime Physical Activities (Practical Living)	--	9	4	9	4
Practical Living/ Vocational Studies	8 Career Planning (Vocational Studies)	--	11	3	11	3
Practical Living/ Vocational Studies	9 Skills & Work Habits for Success (Vocational Studies)	--	10	3	10	3
Practical Living/ Vocational Studies	10 Employability Skills (Vocational Studies)	--	9	2	9	2
Social Studies	1 Government & Civics	4	20	8	24	8
Social Studies	2 Culture & Society	2	15	5	17	5
Social Studies	3 Economics	4	23	6	27	6
Social Studies	4 Geography	4	31	9	35	9
Social Studies	5 History	6	36	7	40	7

Table 2.7
DISTRIBUTION OF ITEMS ACROSS SUBDOMAINS
FOR GRADE 10 OPEN RESPONSE AND MULTIPLE CHOICE

Content Area	Subdomain	Linking MC	Matrix MC OR		Total MC OR	
Practical Living/ Vocational Studies	1 Individual & Health Family Relationships (Practical Living)	--	6	2	6	2
Practical Living/ Vocational Studies	2 Consumer Choices (Practical Living)	--	7	1	7	1
Practical Living/ Vocational Studies	3 Physical Well-being (Practical Living)	--	16	5	16	5
Practical Living/ Vocational Studies	4 Mentally & Emotionally Healthy (Practical Living)	--	16	3	16	3
Practical Living/ Vocational Studies	5 Community Services (Practical Living)	--	4	1	4	1
Practical Living/ Vocational Studies	6 Psychomotor Skills (Practical Living)	--	2	1	2	1
Practical Living/ Vocational Studies	7 Lifetime Physical Activities (Practical Living)	--	3	1	3	1
Practical Living/ Vocational Studies	8 Career Planning (Vocational Studies)	--	13	3	13	3
Practical Living/ Vocational Studies	9 Skills & Work Habits for Success (Vocational Studies)	--	16	4	16	4
Practical Living/ Vocational Studies	10 Employability Skills (Vocational Studies)	--	9	3	9	3
Reading	1 Information	--	36	9	36	9
Reading	2 Literature	--	40	10	40	10
Reading	3 Persuasion	--	24	6	24	6
Reading	4 Practical / Workplace	--	28	7	28	7

Table 2.8
DISTRIBUTION OF ITEMS ACROSS SUBDOMAINS
FOR GRADE 11 OPEN RESPONSE AND MULTIPLE CHOICE

Content Area	Subdomain	Linking MC	Matrix MC OR		Total MC OR	
Arts & Humanities	1 Music	--	14	5	14	5
Arts & Humanities	2 Dance	--	11	4	11	4
Arts & Humanities	3 Drama/Theatre	--	15	5	15	5
Arts & Humanities	4 Visual Arts	--	22	6	22	6
Arts & Humanities	5 Humanities	--	25	2	25	2
Arts & Humanities	6 Literature	--	9	2	9	2
Mathematics	1 Number/Computation	3	24	12	27	12
Mathematics	2 Geometry/Measurement	5	43	11	48	11
Mathematics	3 Probability/Statistics	5	26	4	31	4
Mathematics	4 Algebraic Ideas	6	31	8	37	8
Science	1 Physical Science	6	46	10	52	10
Science	2 Life Science	6	49	12	45	12
Science	3 Earth & Space Science	1	21	7	22	7
Science	4 Inquiry	3	12	6	15	6
Social Studies	1 Government & Civics	0	29	8	29	8
Social Studies	2 Culture & Society	3	7	6	10	6
Social Studies	3 Economics	6	27	6	33	6
Social Studies	4 Geography	3	24	6	27	6
Social Studies	5 History	4	40	8	44	8

Number of Test Questions Per Student

As the assessment moved from KIRIS to the Commonwealth Accountability Testing System, the design of the test changed from a mixed model that included common and matrix sampled items to an entirely matrix sampled design. With the new test design, the number of forms also changed. Whereas KIRIS was based on twelve forms, the Kentucky Core Content Tests employed six base forms with two alternate versions to allow unique pretest items in each of twelve forms (Form 1A/1B through 6A/6B). Despite this change in design, students continued to take the same number of items as under the KIRIS model. The number of items taken by students by subject area is shown below in Table 2.9.

Table 2.9
NUMBER OF ITEMS TAKEN BY STUDENTS BY SUBJECT AREA

	Matrix		Pretest	
	MC	OR	MC	OR
Reading	24	6	4	1
Mathematics	24	6	4	1
Science	24	6	4	1
Social Studies	24	6	4	1
Arts & Humanities	8	2	4	1
Practical Living/Vocational Studies	8	2	4	1

The change in test design between school year 1998 and school year 1999 required an increase in the total number of assessment items for reading, mathematics, science, and social studies. Under KIRIS, the total item pool included 4 common open-response items and 24 matrix-sampled, open-response and 16 common multiple-choice and 96 matrix-sampled, multiple-choice items. Under Kentucky Core Content Tests, the target total item pool increased to 36 open-response and 144 multiple-choice items. In order to reach these total item targets, every matrix and pretest item tested in 1997-98 would have to be used for the 1998-99 Kentucky Core Content Tests. These goals were not met for two reasons:

One, not all pretest items were found to meet the established statistical criteria for item selection. (The desired range for p-values was between .40 and .85 for multiple-choice items. The biserial correlations were ideally .25 or above. The biserial correlations for the incorrect response options were to be negative. For open-response options, no clear numerical guidelines were established, but items which had a disproportionate number of blanks, zeros and ones were to be reviewed critically to determine if they were still grade and content appropriate or should be dropped from the assessment).

Two, because of the decision to move the reading and practical living/vocational studies assessment from grade 11 to grade 10, not all items were viewed by Kentucky's Content Advisory Committees as being appropriate for the new grade level. Consequently, items were dropped from the assessment for both reading and practical living/vocational studies.

Table 2.13 provides the total number of unique items by grade and subject reported by item type (multiple choice and open response).

Table 2.10
NUMBER OF UNIQUE ITEMS BY ITEM TYPE

Grade	Subject	Question Type	Number of Unique Items
04	Reading	Multiple Choice	136
04	Reading	Open Response	34
04	Science	Multiple Choice	144
04	Science	Open Response	36
05	Arts and Humanities	Multiple Choice	96
05	Arts and Humanities	Open Response	24
05	Mathematics	Multiple Choice	143
05	Mathematics	Open Response	35
05	Practical Living/Vocational Studies	Multiple Choice	96
05	Practical Living/Vocational Studies	Open Response	24
05	Social Studies	Multiple Choice	143
05	Social Studies	Open Response	36
07	Reading	Multiple Choice	144
07	Reading	Open Response	36
07	Science	Multiple Choice	144
07	Science	Open Response	36
08	Arts and Humanities	Multiple Choice	96
08	Arts and Humanities	Open Response	24
08	Mathematics	Multiple Choice	144
08	Mathematics	Open Response	35
08	Practical Living/Vocational Studies	Multiple Choice	96
08	Practical Living/Vocational Studies	Open Response	24
08	Social Studies	Multiple Choice	143
08	Social Studies	Open Response	35
10	Practical Living/Vocational Studies	Multiple Choice	92
10	Practical Living/Vocational Studies	Open Response	24
10	Reading	Multiple Choice	128
10	Reading	Open Response	32
11	Arts and Humanities	Multiple Choice	96
11	Arts and Humanities	Open Response	24
11	Mathematics	Multiple Choice	143
11	Mathematics	Open Response	35
11	Science	Multiple Choice	144
11	Science	Open Response	35
11	Social Studies	Multiple Choice	143
11	Social Studies	Open Response	34

Test Blueprint

The Kentucky Department of Education, working with teams of teachers, developed the Test Blueprint for the Commonwealth Accountability Testing System. The blueprint was designed to provide direction to Content Advisory Committees in the development and selection of items for the Commonwealth Accountability Testing System, to help teachers prepare students to take the assessment, and to assist schools in aligning their curriculum to the assessment.

The teachers who participated in the blueprinting activity were knowledgeable of the Core Content for Assessment and represented both ethnic and geographic diversity. The teachers worked in grade-level and content groups to reach consensus about how Kentucky's Core Content for Assessment should be represented in the new assessment. The tables below provide the test blueprint for all grades and subjects assessed by the Commonwealth Accountability Testing System in 1998-99.

Table 2.11
PROPOSED CONTENT COVERAGE FOR READING

Subdomain	Grade 4	Grade 7	Grade 10
Information	35%	25%	20%
Literature	40%	40%	35%
Persuasion	15%	20%	25%
Practical/Workplace	10%	15%	20%
Total	100%	100%	100%

Table 2.12
PROPOSED CONTENT COVERAGE FOR MATHEMATICS

Subdomain	Grade 5	Grade 8	Grade 11
Number/Computation	50%	40%	25%
Concepts	25%	40%	30%
Skills	25%	45%	35%
Relationships	50%	15%	35%
Geometry/Masurement	20%	20%	25%
Concepts	40%	40%	40%
Skills	40%	50%	30%
Relationships	20%	10%	30%

Probability/Statistics	15%	15%	20%
Concepts	40%	20%	30%
Skills	40%	50%	40%
Relationships	20%	30%	30%
Algebraic Ideas	15%	25%	30%
Concepts	40%	35%	40%
Skills	40%	50%	30%
Relationships	20%	15%	30%
Total	100%	100%	100%

Table 2.13
PROPOSED CONTENT COVERAGE FOR SCIENCE

Subdomain	Grade 4	Grade 7	Grade 11
Physical Science	35%	33.3%	35%
Properties of Objects and Materials	33%	----	----
Positions and Motions of Objects	33%	----	----
Forms of Energy	34%	----	----
Properties and Changes in Properties of Matter	----	20%	----
Motions and Forces	----	30%	25%
Transfer of Energy	----	50%	----
Structures of Atoms	----	----	10%
Structures and Properties of Matter	----	----	15%
Chemical Reactions	----	----	25%
Conservation of Energy and Increase in Disorder	----	----	10%
Interactions of Matter and Energy	----	----	15%
Life Science	35%	33.3%	35%
Characteristics of Organisms	35%	----	----
Life Cycles of Organisms	30%	----	----
Organisms and their Environment	35%	----	----
Structure and Function in Living Systems	----	15%	----
Regulation and Behavior	----	15%	----
Reproduction and Heredity	----	10%	----
Diversity and Adaptations of Organisms	----	30%	----
Populations and Ecosystems	----	30%	----
The Cell	----	----	20%
Behavior of Organisms	----	----	5%
The Molecular Basis of Heredity	----	----	20%
Biological Change	----	----	15%
Interdependence of Organisms	----	----	20%
Matter, Energy and Organization in Living Systems	----	----	20%
Earth and Space Science	30%	33.3%	30%
Earth Components	60%	----	----
Objects in the Sky	40%	----	----
Earth Subsystems	----	70%	----
The Solar System and Space Beyond	----	30%	----
Earth Interactions	----	----	80%
Development, Earth Solar System, Universe	----	----	20%
Inquiry			
Abilities Necessary to do Scientific Inquiry	60%	65%	70%
Understanding About Scientific Inquiry	40%	35%	30%
Total	100%	100%	100%

In addition to the Science subdomains (physical, life science, earth and space science) percentages were identified for inquiry skills. At the elementary and middle school levels, a minimum of 25% of the questions was designated to reflect inquiry; at the high school level, the corresponding percentage was 33%.

Table 2.14
PROPOSED CONTENT COVERAGE FOR SOCIAL STUDIES

Subdomain	Grade 5	Grade 8	Grade 11
Government and Civics	20%	25%	20%
People Form Governments	35%	30%	25%
Limited and Shared Power	25%	30%	25%
Rights and Responsibilities of Citizens	40%	40%	50%
Culture and Society	18%	10%	10%
Culture is a System	20%	20%	25%
Cultures Address Human Needs	25%	25%	23%
Social Institutions	25%	20%	21%
Social Interactions	30%	35%	31%
Economics	18%	20%	15%
Economic Problem is Scarcity	25%	25%	22%
Economic Systems and Institutions	20%	25%	21%
Markets/Exchange Goods and Services	25%	25%	27%
Production, Distribution, Consumption	30%	25%	30%
Geography	18%	20%	20%
Patterns on the Earth's Surface	20%	25%	17%
Human Physical Characteristics and Regions	30%	25%	25%
Humans Move, Settle, Interact	20%	25%	30%
Human-Environment Interaction	30%	25%	28%
History	26%	25%	35%
History/Interpretive	30%	20%	24%
History of the United States	70%	40%	38%
World History	----	40%	38%
Total	100%	100%	100%

Table 2.15
PROPOSED CONTENT COVERAGE FOR
PRACTICAL LIVING/VOCATIONAL STUDIES

Subdomain	Grade 5	Grade 8	Grade 10
Practical Living	80%	70%	60%
Individual and Healthy Family Relationships	10%	14.3%	17%
Consumer Choices	10%	14.3%	15%
Physical Well-being	30%	21.4%	25%
Mentally and Emotionally Healthy	10%	14.2%	23%
Community Services	10%	7.1%	8%
Psychomotor Skills	15%	14.3%	5%
Lifetime Physical Activities	15%	14.3%	7%
Vocational Studies	20%	30%	40%
Career Planning	25%	33.3%	20%
Skills and Work Habits	75%	33.3%	43%
Employability Skills	----	33.3%	37%
Total	100%	100%	100%

Table 2.16
PROPOSED CONTENT COVERAGE FOR ARTS AND HUMANITIES

Subdomain	Grade 5	Grade 8	Grade 11
Music	30%	25%	20%
Music Elements	65%	60%	60%
Cultures, Purposes, Periods and Styles	35%	40%	40%
Dance	20%	17%	15%
Dance Elements	30%	30%	----
Dance Movements	30%	30%	----
Dance Production	----	----	25%
Dance Forms	10%	20%	25%
Dance Forms, Cultures, Purposes, and Styles	30%	20%	50%
Theatre	20%	20%	15%
Dramatic Elements and Terminology	10%	25%	25%
Elements of Production	25%	25%	25%
Elements of Performance	----	25%	25%
History, Culture, Styles, and Period	20%	25%	25%
Creative Dramatics	20%	----	----
Visual Arts	30%	25%	20%
Art Elements	25%	20%	15%
Principles of Design	25%	20%	15%
Purposes of Art	15%	15%	20%
Cultures, Periods and Styles	15%	20%	25%
Art Processes	5%	10%	15%
Media	10%	10%	10%
Subject Matter	5%	5%	----
Humanities			20%
Music	----	----	20%
Dance	----	----	20%
Theatre	----	----	20%
Visual Arts	----	----	20%
Literature	----	----	20%
Literature		13%	10%
Types of Literature	----	30%	5%
Genres	----	35%	15%
Elements of Literature	----	35%	20%
Literary Movements/Styles	----	----	30%
Historical and Cultural	----	----	30%
	100%	100%	100%